Thursday January 9, 1997

LT18 (8:50-12:30)

Session 9A18

Microstrip & Printed Antennas 4

Organizer: Albert Papiernik

Chairperson: Albert Papiernik, Univ. de Nice-Sophia Antipolis

Co-Chairperson: Tasuku Teshirogi, Communications Research Laboratory

8:50
Time Domain Approaches for Planar Antennas Analysis
B Jecko, F Torres
IRCOM/EM/CREAPE - Universit╠ de Limoges

9:10
A Planar Microstrip Array Antenna for Vehicular Terminals in Mobile Satellite Communication Systems
Masataka Ohtsuka, Eiji Morimoto, Yoshihiko Konishi, Shuji Urasaki
Mitsubishi Electric Corporation

9:30
Circular Polarization Characteristics of Sequentially Rotated Phased Arrays
*Tasuku Teshirogi, *Masato Tanaka, **Norio Takahashi
*Communications Research Laboratory
**University of Electro-Communications

9:50
CAD Model for Broadband Coax-Fed Stacked Rectangular Microstrip Patch Antenna
*M Edimo, **K Mahdjoubi, **A Sharaiha, **C Terret
*Tekelec-ADE
**Universite de Rennes I

10:10
An Efficient Technique for the Analysis of Tapered Slot Antennas
Hanyang Wang, D Mirshekar-Syahkal, I J Dilworth
University of Essex

10:30 Break

10:50
Broadband Miniature Antenna for Small-Sized Mobile Transceivers
Ch Delaveaud, Ph L ╠veque,F Torres, B Jecko
IRCOM/EM/CREAPE - Universit╠ de Limoges

11:10
A New Optical Technique for Feeding Microwave Microstrip Antennas Based on Electrooptic Modulation
Phillippe Zatta, Tchanguiz Razban
IRESTE

11:30
Broadside Patch and Colinear Coplanar Waveguide Antennas
*A Z Jakal, *B A W Ibrahim, *N J McEwan,*K A S Qassim
*University of Bradford, **NetCom Consultants

11:50
Analysis of a Planar Grating - Reflector Antenna with Chiral Substrate
Guobin Wan, Wei Wan, Xinyu Hou
Northwestern Polytechnical University

12:10
Broadband Active Patch Antenna in Two-sided Configuration
*Bocheng Zhu, **Wenhong Chen, *Shizhi Li
*Beijing Institute of Technology
**Institute of Command and Technology

LT18 (13:30-16:50)

Session 9P18

Microstrip & Printed Antennas 5

Chairperson: Xuexia Zhang, Tsinghua University, Beijing

Co-Chairperson: Kai Fong Lee, Univ. of Missouri-Columbia

13:30
A Unified Spectral Domain Approach to the Analysis of Radiating Planar Structures
A Dreher
FernUniversit╤t

13:50
FDTD Analysis on Multilayered Planar Printed Antennas
Terry Kin-chung Lo, Yeong-ming Hwang
City University of Hong Kong

14:10
A New Presentation of Green's Function for Multilayer Structures
Lijun Jiang, Xuexia Zhang
Tsinghua University, Beijing

14:30
Radiation from Printed Slot Antenna with a Coaxial Feed
M Solaimani, R Abhari
Iran University of Science & Technology

14:50
Full-Wave Analysis of Coupled Microstrip-fed Slot Antennas With Back Cover
H G Akhavan, D Mirshekar-Syahkal
University of Essex

15:10 Break

15:30
Multiple Resonator Broad-Band Microstrip Antenna Array
Xuexia Zhang, Fan Yang, Hongjun Yuan
Tsinghua University

15:50
Mutual Coupling between Rectangular Microstrip Patch Antennas with Cavity Method
N Komjani Barchloui, M Solaimani
Iranian University of Science and Technology

16:10
High Radiation Efficiency Microstrip Array
Nirbhaya Pathak
Electronics and Radar Development Establishment

16:30
A Wideband High Gain Stacked Dual Patch Antenna Array
U K Revankar, G Sathish Babu, B V Ramesh, Y S Raja Rao
Electronics and Radar Development Establishment

Thursday January 9, 1997

LT17 (8:50-11:30)

Session 9A17

Wireless Communications

Organizer: Qizheng Gu
Chairperson: Qizheng Gu, PCSI
Co-Chairperson: Kiyohiko Itoh, Hokkaido University

8:50
Analysis of Nonuniform Multiconductor Transmission Line Systems - Wave Transmission Matrix Method
*M Ali Tassoudji, **Q Gu, ***F Y Yuan
*Qualcomm. Inc., **PCSI Inc., ***Quad Design

9:10
The High Speed Data Transmission System of Satellite-Borne SAR
*Xiaokang Yuan, **Jiazhen Xiang
*Shanghai Institute of Satellite, **Shanghai Academy of Spaceflight

9:30
Power Amplifier Nonlinearity and Adjacent Channel Power in Personnal Handyphone System (PHS)
Qizheng Gu, Leon Lin, Bjorn Bjerede
PCSI

9:50
Signal Polarization Near 900 MHz in and about Vehicles and Within Buildings
K Li, S Mikuteit
Pacific Communication Sciences, Inc.

10:10
Analysis of Digital to RF Analog Interference Due to Ground Noises in Wireless Mixed Signal Modules
Frank Yi Yuan
Quad Design Technology

10:30 Break

10:50
A CMOS IC Distributed Amplifier
*P J Sulivan, **B A Xavier, **D Costa, *W H Ku
*UCSD,**PCSI

11:10
Analysis & Measurement of the Third Order Intercept of an HBT Mixer
*B Xavier, **C S Aitchison
*PCSI
**Brunel University

Thursday January 9, 1997

LT16 (8:50-11:50)

Session 9A16

Computational Techniques 4

Organizer: Geyi Wen

Chairperson: Geyi Wen, University of Electronic Science & Technology of China

Co-Chairperson: Tongji An, Microwave Institute of East China Normal University

8:50
A New FEM to Model Infinite Waveguide of Arbitrary Cross Section
Tongyi An, Xingqi Dong, Haiping Song
Microwave Institute of East China Normal University

9:10
An Explicit Method for Radiation Pattern Calculation of Arbitrarily Shaped Microstrip Antennas Conformal to Cylinders
Canmin Jin, Jiadong Xu
Northwestern Polytechnical University

9:30
Symplectic Algorithms for Electromagnetics
Geyi Wen
University of Electronic Science & Technology of China

9:50
Incorporation of Two Finite-Difference Schemes in Time-Domain
Kang Lan,Yushen Zhao,Weigan Lin
University of Electronic Science & Technology of China

10:10
Finite-Difference Scheme of Box Method in Solving the Electromagnetic Wave Propagation in the Free Space
Jian Fang,Yushen Zhao,Weigan Lin
University of Electronic Science & Technology of China

10:30 Break

10:50
Optimize Multilayered Dielectric Structure Parameters Using Genetic Algorithms
Shouzheng Zhu,Xiang Zhu,Tongyi An
Microwave Institute of East China Normal University

11:10
Analysis on the Coupling of a Cylindrical Cavity and Rectangular Waveguides
Guofen Yu,Wenxiang Wang,Shenggang Liu
University of Electronic Science & Technology of China

11:30
Scattering Analysis of Arbitrarily Shaped 3-D Cavites by Shooting and Bouncing Beams
Y Z Ruan,W M Liu, H J Zhou
University of Electronic Science & Technology of China

LT16 (13:30-15:50)

Session 9P16

Computational Techniques 5

Organizer: Geyi Wen

Chairperson: Geyi Wen, University of Electronic Science & Technology of China

Co-Chairperson: Tongji An, Microwave Institute of East China Normal University

13:30
Computer-Aid Design of Dual-Reflector Antenna Systems with Optimum Amplitude and Phase Distribution
Jian Fang, Yushen Zhao, Weigan Lin
University of Electronic Science & Technology of China

13:50
Electromagnetic Pulse Scattering and Inverse-Scattering by Stratified Dispersive Media
Kailiang Dai,Yushen Zhao,Weigan Lin
University of Electronic Science & Technology of China

14:10
Near Field Scattering Computation for Targets of Complex Shape
Jiadong Xu, Canmin Jin
Northwestern Polytechnical University

14:30
Computer Aided Design of Slotted Waveguide Linear Arrays
S Christopher, Suma Varughese
Electronics and Radar Development Establishment

14:50
Moment Method Analysis of Longitudinal-Offset Waveguide Slot Coupler
A K Singh, V V S Prakash, S Christopher
Electronics and Radar Development Establishment

15:10 Break

15:30
Singular Integral Equation for Modeling Diffraction by a Local Inhomogeneous Cylinder
A S Ilinski, A B Samokhin, U U Kapustin
Moscow State University

Thursday January 9, 1997

LT15 (8:50-12:30)

Session 9A15

FDTD & Applications

Chairperson: Deyun Lin, Tsinghua University, Beijing
Co-Chairperson: Fung-Yuel Chang, The Chinese University of Hong Kong

8:50
FDTD Analysis of EMP Scattering on a Small Square Conductor Coated with a Thin Dielectric Material
Ying-Wem Su, Jhin-Fang Huang
National Taiwain Institute of Technology

9:10
A Subgridding Method for the Finite-Difference Time-Domain Method
Deyun Lin, Shizhong Liu
Tsinghua University

9:30
Calculate the Equivalent Circuit Parameters of the E-plane Strip in Rectangular Waveguides with the FDTD Method
Jianyi Zhou, Quanrang Yang, Feng Cheng, Wen Wu
Southeast University

9:50
An Efficient Absorbing Boundary Condition for FDTD Field Modeling Based on Matrix Pseudoinversion
Shuzhong Wang, Yongling Zhang
Shanghai University

10:10
Time-Domain Analysis and Modeling of Microstrip Circulators
D Schulz, A Ahland, E Voges
Universit╤t Dortmund

10:30 Break

10:50
Full-Wave Analysis of Microstrip Lines Printed on Anisotropic Substrates Using a 2-D Finite Difference Time Domain Method
Ming-Sze Tong, Yinchao Chen
Hong Kong Polytechnic University

11:10
The PML Absorbing Boundary Condition in the FD-TD Simulation Technology
Deyun Lin, Ziqin Guo
Tsinghua University

11:30
A Highly Efficient Finite Difference Time Domain Algorithm for Analyzing Axisymmetric Cylindrical Structures
*Yinchao Chen, **Raj Mittra
*Hong Kong Polytechnic University
**University of Illinois at Urbana-Champaign

11:50
A Novel Method for Eliminating Reflection From Absorbing Boundary in FDTD Simulation
*Qing-Xin Chu, **Fung-Yuel Chang, **Yuen-Pat Lau
*Xidian University
**The Chinese University of Hong Kong

12:10
The Determination Behaviour of a Thick Dipole Using FDTD Method
Feng Xu, Zuwei Feng
Nanjing Research Institute of Electronics Technology

LT15 (13:30-16:30)

Session 9P15

Development & Applications in Finite Difference Time Domain Method

Organizer: O M Ramahi
Chairperson: O M Ramahi, Digital Equipment Corporation
Co-Chairperson: John Litva, McMaster University

13:30
The Combination of FDTD Method with Pseude-Noice Sequences to Analyze Wave Propagation for PCS Communications
John Litva, Chen Wu, Patrick Yau
McMaster University

13:50
Impedance Characterization Using Finite Difference Time Domain Analysis
*Atef Z Elsherbeni, **J Michael Johnson, **Yahya Rahmat-Samii
*University of Mississippi
**University of California

14:10
Transient Modeling of Subsurface EM Problems Using the Finite-Difference Method
*Weng C Chew, *Yong H Chen, **Michael L Oristaglio
*University of Illinois
**Schlumberger-Doll Research

14:30
Using Non-Uniform FDTD Techniques to Model Narrow-Angled TEM Horn Antennas
*Kurt L Shlager, **John B Schneider
*Space and Electronics Group,
**Washington State University

14:50
On the Modeling of Primary Sources in FDTD Simulations
Omar M Ramahi, Colin Brench
Digital Equipment Corporation

15:10 Break

15:30
FDTD Analysis of Multi-Conductor V Lines
*Omar M Ramahi, **Atef Z Elsherbeni, **Charles E Smith
*Digital Equipment Corporation
**University of Mississippi

15:50
Time-Domain Model Synthesis of Diode Termination With FDTD Simulation of Microstrip
*Yuen-Pat Lau, **Qing Xin Chu, *Fung-Yuel Chang
*The Chinese University of Hong Kong
** Xidian University

16:10
The Electromagnetic Wave Scattering from a Planar Grating Embedded in a Dielectric Slab Using FDTD Method
Zuwei Feng, Feng Xu
Nanjing Research Institute of Electronics Technology

Thursday January 9, 1997

LT14 (8:50-11:50)

Session 9A14

Millimeter, Submillimeter and Light Waves 5

Organizer: Deming Xu
Chairperson: Deming Xu, Shanghai University
Co-Chairperson: Edwin M Biebl, Technische Universitat Munchen

8:50
The Photo-induced Carrier Distribution and Millimeter Wave Propagation in the Silicon Dielectric Waveguide
Deming Xu, Xiangying Wu, Shiping Zhou
Shanghai University

9:10
The Characteristics of Optically Controlled Superconductive-Dielectric Resonator
Shiping Zhou, Kexi Xu, Jiashan Bao
Shanghai University of Science and Technology

9:30
On the Interaction of Lightwave with Superconductors
Jiashan Bao
Shanghai University at Jiading

9:50
Modified Mode Matching Model for Superconductive Dielectric Resonators
Shiping Zhou, Kexi Xu, Jiashan Bao
Shanghai University at Jiading

10:10
Balanced Harmonic Mixer at W-Band
W M Shi, K F Tsang, D Jing
City University of Hong Kong

10:30 Break

10:50
Computer-Aided Design of a Dielectric, Bifocal Lens with Extreme Wide Scanning Angle
Thomas M┼ller, Gerhard Friedsam, Ralph H Raβhofer, Erwin M Biebl
Technische Universit╤t M┼nchen

11:10
Technique for Simutaneous Measurement of ε and μ of Multilayered Media Using a Flanged Open-Ended Waveguide Probe
*Fu Chengpeng, ** Xu Deming
*Shanghai Jiao Tong University
**Shanghai University

11:30
100GHz Mixer Using Superconductor
D Jing, W H Chan, K F Tsang, W M Shi
City University of Hong Kong

LT14 (13:30-15:10)

Session 9P14

Millimeter, Submillimeter and Light Waves 6

Chairperson: D G Fang, Nanjing University of Science and Technologoy
Co-Chairperson: Y O Yam, City University of Hong Kong

13:30
Parametric Down Converter
Dekun Zhang, Simin Li
Guilin Institute of Electronic Technology

13:50
The Study of the Blue-Green Optical Communication System
Farliang Ao, Dekun Zang, Chuanyun Zou, Ling He
Guilin Institute of Electronic Technology

14:10
A Front-Stage of Space Diversity Reception for Optical Receiver
Dekun Zhang, Farliang Ao, Chuanyun Zou, Ling He
Guilin Institute of Electronic Technology

14:30
LB-Film Deposited Optical Channel Waveguides with Sensing Functions
Fushen Chen
University of Electronic Science and Technology

14:50
Conceptual Design of Millimetrewave Collision Avoidance Radar for Locomotives
Ashis Sanyal
Department of Electronics, Government of India

15:10 Break

Thursday January 9, 1997

LT13 (8:50-12:30)

Session 9A13

Superconducting Electronics

Organizer: G P Srivastava

Chairperson: G P Srivastava, University of Delhi

Co-Chairperson: Janina Ceremuga, James Cook Uniersity of North Queensland

8:50

Adaptive Microwave Filters Using High Temperature Superconductors

M J Lancaster, A Porch,F Huang, J Powell, B Avenhaus, J Hong, F Wellhofer, P Woodall, C N Darlington, T Bollmeier, B Stritzker

The University of Birmingham

9:10

Power Dependence of Losses in High Temperature Superconducting Films and Circuits

Janina Ceremuga

James Cook University of North Queensland

9:30

The Difference between the Planar Waveguide Models of HTSC and Normal Conducting Microstrip Transmission Lines

Tiejun Yu, Xue Xia Zhang

Tsinghua University

9:50

High-Temperature Superconducting Printed Antennas

*Z Wu, *D Lacey, *G Drossos, *L E Davis, **T W Button, **P Smith

*UMIST, Manchester, **University of Birmingham

10:10

Analysis of Superconducting Microstrip Line by Using the FDTD Method

Jiazong Zhang, Yunyi Wang, Y Y Chen

Southeast University

10:30 Break

10:50

A Microwave Oscillator Stabilized with High-Tc Superconducting Microstrip Resonator

*B B Jin, *R X Wu, *L Kang, *Q H Cheng, *P H Wu, **D Jing, **K Shao, ***M M Jiang, ***J Z Zhang, ***Y Y Wang,****Y L Zhou, ****H B Lu, ****S F Xu, ****M He,

*Nanjing University, **Nanjing Electronic Device Institute

***Southeast University, ****Chinese Academy of Sciences

11:10

Light Weight, Small Size, High Temperature Superconductive Microwave Filters for Space Applications

B K Sarkar

Society for Applied Microwave Electronics Engineering and Research

11:30

An Analysis of Harmonics and Intermodulations for Superconductive Dipole Antennas and Circuits at High Power

*Y L Chow, **H Z Tang

*City Univ. of Hong Kong, **Univ. of Waterloo

11:50

Electrodynamics of High Temperature Superconductors

*G P Srivastava,**N D Kataria, * M Jaya Kumar

*University of Delhi, **National Physical Laboratory

12:10

Frequency Mixings and Applications at 3mm Waveband Using High Temperature Superconducting Josephson Junctions

*H B Wang, *W W Xu, *Q H Cheng, *P H Wu , **S Q Xue, **H H Li, **X C Shen

*Nanjing University, **National Institute of Metrology

LT13 (13:30-15:50)

Session 9P13

RF Circuits for Mobile Applications

Organizers: G B Morgan, K F Tsang

Chairpersons: G B Morgan, University of Wales

K F Tsang, City University of Hong Kong

13:30

Medium Power UHF Frequency Synthesizer Design Using Large Signal S-Parameter Analysis

*Hon Wah Ma, *Chung Ming Yuen, **G B Morgan

*City University of Hong Kong

**University of Wales

13:50

Low Voltage and Cost Effective Design Techniques for 900MHz Frequency Synthesizer

Chung Ming Yuen, Chak Nam Wong

City University of Hong Kong

14:10

Extremely Low Voltage Circuit Design Techniques of Low Phase Noise 900 MHz Voltage Controlled Oscillator

Chung Ming Yuen, Chak Nam Wong, Kim Fung Tsang

City University of Hong Kong

14:30

Comparison on Three Design Approaches of Pager Receiver : Double Conversion, Single Conversion and Direct Conversion

Chung Ming Yuen, Hon Wah Ma, Kim Fung Tsang

City University of Hong Kong

14:50

Low Intermodulation Distortion Power Amplifiers

Man Shi Li, Wing Shing Chan

City University of Hong Kong

15:10 Break

15:30

Cell Enhancers for use in PCN/PCS

Wah Yan Chow, Wing Shing Chan

City University of Hong Kong

Thursday January 9, 1997

LT12 (8:50-11:10)

Session 9P12

Rough Surface Scattering

Chairperson: Leung Tsang, University of Washington
Co-Chairperson: C H Chan, City University of Hong Kong

8:50
Experimental Study of Multiple Scattering Effects from Metallic Particulate Surfaces
F Moreno, F Gonzålez, J M Saiz, P J Valle, E M Ortiz
Universidad de Cantabria

9:10
Cylindrical Surface Plasmons on Flat Metallic Surfaces with Small Particles
P J Valle, E M Ortiz, J M Saiz, F Moreno, F Gonzålez
Universidad de Cantabria

9:30
Plane Wave Scattering by Cracks
Ryoichi Sato, Hiroshi Shirai
Chuo University

9:50
Scattering from A Randomly Rough Layer
S Mudaliar
ARCON Corporation

10:10
The Rough Surface Scattering Approach as the Theoretical Basis of Up-To-Date Goniophotometry
D A Rogatkin, L G Moiseeva, V V Tcherny
Moscow State Institute of Electronics & Mathematics

10:30 Break

10:50
The Scattrering Theory for All Relations of the Electromagnetic Wavelengths to the Reflector Sizes
Anatoli Skriabine
Moscow State Technical University of Civil Aviation

Thursday January 9, 1997

LT11 (8:50-13:10)

Session 9A11

Remote Sensing of the Atmosphere

Organizers: D Narayana Rao, G Viswanathan

Chairperson: D Narayana Rao, S. V. University

Co-Chairperson: J R ε ttger, EISCAT Scientific Association

8:50

The French INSU-METEO VHF/UHF ST Radars Designed for the Remote Sensing of the Clear Atmosphere

R Ney, CNRS-CETP

9:10

Observation of the Evolution of Atmospheric Thermal Structure Using MST Radar

*K Revathy, *V Augustin, *S R Prabhakaran Nayar,
**B V Krishna Murthy
*University of Kerala, **Vikram Sarabhai Space Centre

9:30

MST Radar:Studies on Eddy Dissipation Rate

D Narayana Rao, P Kishore, S V B Rao
S. V. University

9:50

Lightning Backscatter Observations with the VHF Radar Interferometer Technique

*J┼rgen R ε ttger, **C H Liu, **C J Pan, **S Y Su
*EISCAT Scientific Association, **National Central University

10:10

Study of Es Occurrences During Some Major Meteor Shower Periods

*G Yellaiah, **B Lokanadham
*Kakatiya University,**Osmania University

10:30 Break

10:50

A Method for Adaptive Moments Estimation Technique Applied to MST Radar Echoes

*V K Anandan, **P Balamuralidhar, *P B Rao, *A R Jain
*National MST Radar Facility
**Society for Applied Microwave and Electronics Engineering

11:10

Spectral Analysis of Atmospheric Signal Using Higher Order Spectral Estimation Technique

*V K Anandan, **G Ramachandra Reddy, *P Balarama Rao
*National MST Radar Facility,**S V University College of Engg.

11:30

Sources of Gravity Wave Activity in the Troposphere and Lower Stratosphere

P Kishore, K Krishna Reddy, S V B Rao, D Narayana Rao
S. V. University

11:50

Radar Wind Profiling for Rocket Launches

D Narayana Rao, S V B Rao, P Kishore, M Hareesh
S. V. University

12:10

Application of Quality Control Techniques to the Wind Data Obtained from the Indian MST Radar

M Hareesh, T Narayana Rao, S Venkoba Rao, P Kishore, D Narayana Rao
S. V. University

12:30

Lower Atmospheric Oscillations as Observed by Indian MST Radar at Gadanki, Tirupati

Gopa Dutta, H Aleem Basha, B Bapiraju, R Raindranath Raju
Anwar Ul-uloom College

12:50

Interferometer Applications of VHF Radars for Studies of the Lower and Middle Atmosphere

J┼rgen R ε ttger
EISCAT Scientific Association

Thursday January 9, 1997

LT10 (8:50-12:10)

Session 9A10

Waves in Composite and Complex Media

Organizers: L C Botten, R C McPhedran
Chairperson: L C Botten, University of Technology
Co-Chairperson: R C McPhedran, The University of Sydney

8:50
Extending the Coherent Potential Approximation to the Intermediate Frequency Regime
Ping Sheng
The Hong Kong University of Science and Technology

9:10
Transport Properties in Random Media
C M Soukoulis
Ames Laboratory

9:30
Critical Behaviour at Long Wavelengths in Gratings and Grids
*L C Botten, **R C McPhedran, **N A Nicorovici
*University of Technology, **The University of Sydney

9:50
Homogenization of Small Composite Objects
D Maystre, D Felbacq, G Tayeb
Laboratoire d'Optique Electromagn╟tique

10:10
Development of a Diffraction Theory for Finitely Conducting Capacitive Grids
*R C McPhedran, **L C Botten, *N A Nicorovici, **G H Derrick
*The University of Sydney, **University of Technology

10:30 Break

10:50
Generalised Interferometric Properties of Capacitive Grid Stacks
*N A Nicorovici, *L C Botten, **R C McPhedran
*The University of Sydney, **University of Technology

11:10
Radiation Modes of an Asymmetric Chiral Slab Waveguide - A General Approach to a New Canonical Problem
A Topa, C R Paiva, A M Barbosa
Instituto de Telecomunicacoes, IST

11:30
General Optimization Approach to the Frequency-Domain Inverse Problem for a Stratified Bianisotropic Slab
Martin Norgren
Royal Institute of Technology

11:50
Surface Electromagnetic Waves in Dielectric Arrays of 1D and 2D Periodicity
*F Ramos-Mendieta, **Peter Halevi
*Universidad de Sonora
**Instituto Nacional de Astrofisica Optica v Electronica

LT10 (13:30-17:30)

Session 9P10

Random Media, Nonlinear Media and Turbulent Media

Chairperson: J R Wang, NASA, Goddard Space Flight Centre
Co-Chairperson: Fang Li, Academia Sinica

13:30
Non-Gaussian Statistics of Scattered Waves and the Inverse Problem
K I Hopcraft, University of Nottingham

13:50
Charge Density Fluctuation of Low Frequency Due to Dust Grain in the Ionosphere
Fang Li, Academia Sinica

14:10
Profiling of Atmospheric Water Vapor From Radiometric Measurements of MIR and SSM/T-2
*J R Wang, **L A Chang
*NASA Goddard Space Flight Center, **Futuretech Corporation

14:30
Contrast and Comparison of the Electrodynamics of Various Metals under the Action of Large Electric Currents
*G W Jarriel Jr, *M E Baginski, **K Thomas, ***E C Schaeffer
*Auburn Uni., **WL/MNMF, ***U.S. Military Academy

14:50
Eigenvector Analysis in Bi-Anisotropic Material Modeling
*Ari Sihvola, **Frank Olyslager
*Helsinki Uni.of Technology, **Uni. of Ghent

15:10 Break

15:30
VHF Scintillation and Irregularities in the Medium
M K Barman,A K Barbara,M Devi
Gauhati University

15:50
Prediction of Microwave Fade in the Irregular Atmospheric Environment
S Duttagupta, M Devi, A K Barbara
Guwahati University

16:10
Determination of Structure Constant Parameter of Turbulent Medium and Microwave Propagation
S Sharma,A K Barbara, M Devi
Gauhati University

16:30
Peculiarities in Electromagnetic Waves Scattering by Nonlinear Scatterers Crossing Two Media Boundary
A A Gorbachev, T M Zaboronkova, A A Vasenkov
Radiophysical Research Institute

16:50
Experimental Detection of Fractal-Like Properties of the Tropospheric Propagation Channels
T Arsenyan, P Korolenko, V Lomonosov, N Fedotov
Moscow State University

17:10
Prediction of Ground Wave Propagation over Multi-Sectional Impedance Paths
Yu B Bashkuev, M G Dembelov, V R Advokatov
Siberian Dept of Russian Academy of Sciences

Thursday January 9, 1997

LT9 (8:50-11:10)

Session 9A9

Blue-Green Light Emitters, Photonics and Nonlinear Optics

Organizer: T Taguchi
Chairperson: T Taguchi, Yamaguchi University
Co-Chairperson: N Yamada, Hewlett-Packard Laboratories

8:50
Characteristics of Pulsed Electroluminescence of High-Efficient InGaN Blue LEDs
*M Fujimoto, *Y Yamada, *T Taguchi, **S Nakamura, **G Shinomiya
*Yamaguchi University,
**Nichia Chemical Industries, Ltd.

9:10
Electroluminescence Properties of Single Quantum Well Blue and Green LEDs
*T Taguchi, *M Fujimoto, *Y Yamada, **S Nakamura, **G Shinomiya
*Yamaguchi University,
**Nichia Chemical Industries, Ltd.

9:30
Second-Harmonic Blue Laser Emission from Vertical-Cavity Surface-Emitting Laser
Norihide Yamada, Yasuhisa Kaneko, Shigeru Nakagawa, Dan E Mars, Tetsuya Takeuchi
Hewlett-Packard Laboratories

9:50
The Kernels of the Boundary Integral Equation which Describes the Rotation-Symmetric Radiation Problem
Matthias Ehrich, Joachim Kuhlmann, Dirk Netzler, Christian Stεhr
Universit╤t der Bundeswehr Hamburg

10:10
Guided-Type Second Harmonic Generation in Ion Implanted MgO:LiNbO$_3$
*N Hamelin, *Y T Chow, **P J Chandler
*City University of Hong Kong
**The University of Sussex

10:30 Break

10:50
Defect Density Control of GaN on 6H-Si(0001) and Sapphire
Dongjin Byun, Gyeungho Kim, Jaesik Jeong, Dong-Hwa Kum
Korea Institute of Science and Technology

Thursday January 9, 1997

LT8 (8:50-11:50)

Session 9A8

Photonics, Nonlinear Optics and Devices 4

Organizer: Ching Ting Lee, W N Cheung
Chairperson: Ching Ting Lee, National Central University
Co-Chairperson: W N Cheung, University of Canberra

8:50
Improved Lithium Niobate Optical Waveguide Bending
Jeng-Hong Lee, Way-Seen Wang
National Taiwan University

9:10
Tolerance Analysis of Laser-to-Fiber Coupling Using an Ultra-Thin Rod Lens
C D Su, L A Wang
National Taiwan University

9:30
The Photorefractive Properties of $BaTiO_3$ Single Crystal Reduced in a Hydrogen Atmosphere
*J Y Chang, *C Y Huang, *R H Tsou, *C R Chinjen, **C C Sun, *M W Chang
*National Central University
**Chine Hsin College of Technology & Commerce

9:50
Design of Photon Coupled Logic Circuits
W N Cheung
University of Canberra

10:10
Resistance to External Optical Feedback of Low Chirp Strained-Quantum-Well Complex-Coupled DFB Laser
*Chi-Yu Wang, *Zuon-Min Chuang, *Wei Lin, *Yuan-Kuang Tu, **Ching-Ting Lee
*Ministry of Transportation and Communications
**National Central University

10:30 Break

10:50
Photon Coupled Transistor Characterisation and Applications
Kai Wang, W N Cheung, Paul J Edwards
University of Canberra

11:10
Photonic Signal Processing Using Fibre-Optic Systems
Le Nguyen Binh
Monash University

11:30
The Photon Coupled Transistor: A Quantum Noise Suppressed Device
Paul J Edwards
University of Canberra

LT8 (13:30-17:30)

Session 9P8

Optoelectronics

Organizer: E Herbert Li
Chairperson: E Herbert Li, The University of Hong Kong
Co-Chairperson: E Mazur, Harvard University

13:30
Acousto-Optic Interactions in III-V Semiconductor Quantum Well Structures for Optical Device Applications
B L Weiss, C Thompson, University of Surrey

13:50
Ion Implantation Intermixing of Quantum Wells and its Applications to Optoelectronic Devices
*H H Tan, *F Karouta, **Y Kim***, *C Jagadish, ****P T Burke, ****M Gal
*Australian National University, **Eindhoven University of Tech.
***KIST, ****University of NSW

14:10
The Effect of Interdiffusion on the Realization of Polarization Insensitive Quantum Well
*W C H Choy, *B L Weiss, ** E H Li
*Univ. of Surrey, **Univ. of Hong Kong

14:30
Quantum Well Infrared Detectors
Gamani Karunasiri
National University of Singapore

14:50
Realization and Modeling of Extremely Efficient VCSELs
R Michalzik, B Weigl, G Reiner, M Grabherr, K J Ebeling
University of ULM

15:10 Break

15:30
Thermal Analysis of Semiconductor Lasers
P R Vaya
Indian Institute of Technology

15:50
Analysis and Design of High-Power Single-Mode Double Tapered Waveguide Distributed Feedback Lasers
S F Yu
University of Hong Kong

16:10
Optoelectronic Applications from MBE-grown ZnSTe-based Structures
I K Sou, Z Yang, K S Wong, G K L Wong
Hong Kong University of Science & Technology

16:30
Design of Low Cost Optical Modulators in SIMOX
G T Reed
University of Surrey

16:50
Polymers for Photonics System
Alok K Das
Jadavpur University

17:10
On Measurement of Spontaneous Emission From InGaAs/InGaAsP/InGaP/GaAs-0.98 Micron Laser Devices, at Different Temperatures
*P P Suratkar, *Y G K Patro, **B M Arora, ***A M Narsale
*Powai, **Tata Institute of Fundamental Research,
***University of Bombay

Thursday January 9, 1997

LT7 (8:50-12:10)

Session 9A7

Electromagnetics & Microwaves

Chairperson: Charles Kohler, Army Research Laboratory
Co-Chairperson: Albert K Y Lai, The Chinese University of Hong Kong

8:50
A Study of Signal Division into Detector Arrays with Different Noise Types
P C Y Chang, K I Hopcraft, M G Somekh
University of Nottingham

9:10
New Gauge Model for Quantum Electrodynamics and Ferromagnetism
Sze Kui Ng
Hong Kong Baptist University

9:30
High Power Microwave Energy and Mean Power Measurement
Xiangsheng Li, Dongqun Chen, Genshen Ling, Yong Wang, Chuanlu Li
National University of Defense Technology

9:50
Developments in Electromagnetic Tomography for Industrial Applications
G M Lyon, Z Z Yu, A J Peyton
University of Lancaster

10:10
Results on an Earth-Satellite Propagation Medium Structure
Armando Rocha, Jos╠ Neves
University of Aveiro

10:30 Break

10:50
Design of Matched Saw Pulse Compression Filter
Ashok Kumar, M U Sharma, P C Nagpal
Solidstate Physics Laboratory

11:10
The Devices with Independence Phase Shift from Transfer Factor
O V Stukach, V N Ilyushenko
Tomsk State Academy of Control Systems and Radioelectronics

11:30
The Principles of Picosecond Devices Designing
O V Stukach, V N Ilyushenko
Tomsk State Academy of Control Systems and Radioelectronics

11:50
The Invariance Principle as a New Criterion of Optimization of Radiotechnical Devices
O V Stukach, V N Ilyushenko
Tomsk State Academy of Control Systems and Radioelectronics

LT7 (13:30-15:10)

Session 9P7

Ferrite Devices & Measurements

Chairperson: Matthias Ehrich, Universitat der Bundeswehr Hamburg
Co-Chairperson: D G Zhang, Shenzhen University

13:30
Magnetic Field of A Coil with a Ferromagnetic Core
Matthias Ehrich, Joachim Kuhlmann, Dirk Netzler, Chritsian St ε hr
Universit╤t der Bundeswehr Hamburg

13:50
Reciprocal Ferrite Phase Shifter for Millimeter Wave Electronic Scanning Antenna Applications
B Chan, B Dirassen
D ╟partement d'Etudes et de Recherches en Micro-Ondes

14:10
Synthetical Theory of the Microwave Ferrite Device and Experimental Research
Sheng-chuan Zhu
Peking University

14:30
Analysis and Comparison of Measuring Microwave Permeability and Permittivity by Using the Cavity Different Method
Sheng-chuan Zhu, Hai-ying Chen
Peking University

14:50
3 mm Y-junction Waveguide Circulator with A Ferrite Sphere
*D G Zhang, *X H Tang, **Edward K N Yung
*Shenzhen University
**City University of Hong Kong

15:10 Break